# NRENs: TYING COMMUNITIES TOGETHER

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# About Eko-Konnect

- Research & Education Network for Education Institutions in the Lagos area established in 2009.

- Goals include delivering high capacity networks and content for education & research institutions.

- Work with NgREN secretariat and institution beyond Lagos area to develop the wider NgREN & Federation

- Provide frameworks for researchers, student & faculty to participate in projects that integrate research, education and innovation into Nigerian West Africn and wider global REN community.

# Eko-Konnect NREN Community Development

- African Training Initiative (ATI)
- Participated in the ei4africa project that resulted in de-infrastructure and Nigerian catch-all IdP deployment.
- Hosted ei4Africa Thematic Workshop in Lagos
- Participated TTA projects with KTH that helped build Eko-Konnect Pilot REN.
- Developing Mobile apps for civil society and NGOs as part of 2nd phase of Ford Foundation Project called NgMobicon 2.
- Internet Governance, Internet Freedoms Advocacy
- Affiliate Member of WACREN

# Improving Research

- Research not confined to location.

- Requires collaboration among researchers in disparate locations.

- Requires access to resources.

- Access to raw research data is required to validate research undertaken and findings deduced.

- Availability of raw data extends research.

- How do NRENs Help?

# What is a Research Community?

- Group of Scientists working together using common e-infrastructure.

- An NRENs goal is to provide a platform for its community (includes researchers) that utilises infrastructure and services to improve collaboration.

- Researchers should be aware of resources available to them from their NRENs to improve research and promote greater visibility.

- NRENs offer more than just providing bandwidth

# The NgREN Federation

- A set of trust domains participating in a confederation that shares some common attributes.

- Federations allows NREN members to have secure & controlled access to resources and services.

-  Comprised of Identity Providers (academic and research institutions).

- Service Providers: Entities that provide services by receiving information about a user from a trusted domain and providing services based on defined policies.

- Developing NgREN federation is important for institutions to gain access to available services.

# Catch-all Federation

- Developing a national federation requires development of IdPs, SPs and confederation

- Institution IdP's need to be deployed and policies defined which takes some time.

- Catch-all IdPs are a way for users or institutions that have not yet part of a federation or not have not created their IdPs to gain federated access to some services.

# Examples of Catch-all Federations

- NgREN Catch-all IdP: https://idp.ngren.edu.ng

- WACREN *https://openidp.**wacren**.net*

- GrIDP Identity Federation: https://gridp.garr.it

# What Researchers Can Contribute

- EU Projects promoting e-infrastructure have built demonstration platforms to showcase applications that can be used by African scientists.
- Make research projects available via federated access through the creation of science gateways (SGW).
- African Centres of Excellence and projects involved with the collection and analysis of large data sets are suited for such e-infrastructure & SGW development.
- Sci-GaIA winter school aims to build technical capacity
- Eko-Konnect willing to collaborate with researchers and their institutions in SGW and e-infrastructure development.
- Complement Sci-GaIA capacity building activities.

# DevOps & Ansible Training

- Concluded Workshop a starting point for Researchers, their Technical teams and Eko-Konnect to develop IdP and see how research projects can leverage

- The WACREN EduID Cloud Solution will help fast track IdP development for Institutions with infrastructure challenges.

- Participation in Sci-GaIA projects facilitated by WACREN (Eko-Konnect is WACREN affiliate member) will create awareness and exposure to additional support beyond NREN support.

# IdP Cloud Project

- Fast track Federation development
- Leveraging WACREN EduID Cloud Infrastructure
- GBB Partnering with WACREN to provide hosting services.
- Eko-Konnect providing pilot institutions on the back of DevOps Workshop and this seminar.
- Precursor to deployment of other services that can be leveraged and offered by researchers e.g. Science Gateways.

# Centres of Excellence & SGWs

- Opportunity to improve research output by providing e-infrastructure for research that involves large data sets.

- African Centres of Excellence and Research units of institutions are ideal for developing e-infrastructure and consuming available federated services.

- Eko-Konnect willing to partner with researchers and institutes to support and develop federated e-infrastructure.